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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,389	03/29/2002	Tetsujiro Kondo	450108-03398	2393

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EXAMINER	
FLANDERS, ANDREW C	

ART UNIT	PAPER NUMBER
2614	

MAIL DATE	DELIVERY MODE
10/27/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/089,389	KONDO ET AL.	
	Examiner	Art Unit	
	ANDREW C. FLANDERS	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *11-20,23 and 24* is/are allowed.

6)☒ Claim(s) *1-10,21 and 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, see the English translation of the foreign priority document, filed 01 October 2008, with respect to the rejection of Gao have been fully considered and are persuasive. The rejection of the claims under Gao has been withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 6 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kondo (U.S. 6,658,155)

The applied reference has a common Assignee or Inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding **Claim 1**, Kondo discloses:

A digital-signal processing apparatus for converting an input digital signal, comprising (Fig. 1):

envelope calculation means for calculating the envelope of the input digital signal (pixel-value update circuit updates pixel values, the higher four bits at the MSB side of the pixel data, highest bits indicating highest signal threshold, i.e. 'envelope'; they are then output to the upper-layer image memory 3; col. 10 lines 30 – 38);

class classification means for classifying the input digital signal into a class according to the calculated envelope (Class code selection circuit 8 selects an appropriate set for each pixel of the upper-layer image input from the selector 5 corresponding to the upper-layer image memory 3; col. 10 lines 38-45); and

prediction calculation means for prediction-calculating the input digital signal by a prediction method corresponding to the class to generate a digital signal converted from the input digital signal (prediction coefficient update circuit generates a set and outputs it to the memory; class codes are fed back upper layer image memory which then effect the selector; thus the prediction update can be said to be corresponding to the class; Fig. 1 and col. 10),

wherein the digital signal is provided to an output device (predictions are output to the convergence determination circuit 10; in the alternative, the convergence determination circuit outputs updated data; Fig. 1) .

Regarding **Claim 2**, in addition to the elements stated above regarding claim 1, Kondo further discloses:

the input digital signal is a digital audio signal (i.e. invention not limited to images, can also be applied to an audio signal; col. 31 lines 65-67).

Regarding **Claim 3**, in addition to the elements stated above regarding claim 1, Kondo further discloses:

wherein the prediction calculation means uses prediction coefficients generated in advance by learning according to a desired digital signal (initial prediction coefficient is used by the system; Fig. 1; it is provided initial to the various blocks and thus can be considered to be generated in 'advance'; see line between blocks 2 and 4 in Fig. 1).

Regarding **Claims 4 – 6**, claims 4 – 6 claim the same limitations as the claims above and are rejected under the same grounds.

Regarding **Claim 21**, in addition to the elements stated above regarding claim 1, Kondo further discloses:

A program storage medium for making a digital signal processing apparatus execute a program which is recorded on said program storage medium (i.e. software program; flowcharts in the Figs., also computer system in Fig. 33).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7 – 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo (U.S. Patent 6,658,155).

Regarding **Claim 7**, all elements claimed in claim 7 are taught by Kondo as stated above regarding claim 1 except apprentice-digital-signal generating means for generating an apprentice digital signal obtained by making a desired digital signal worse.

However, down sampling a audio signal is notoriously well known in the art. Applying a down sampling technique on the digital signal of Kondo would remove samples (and thus thin it out as disclosed by the apprentice technique in the specification) and meet the claimed limitation. It would be desirable to add such a feature in order to achieve a desired bandwidth or to save on bandwidth limitations.

Regarding **Claims 8 – 10 and 22**, claims 8 - 10 and 22 claim the same limitations as the claims 1 – 7 and 21 above and are rejected under the same grounds.

Allowable Subject Matter

Claims 11 – 20, 23 and 24 are allowed.

Regarding Claims 11 – 16 and 23, the prior art teaches all elements of claims 11, 14 and 23 except the carrier extraction and modulation (and their respective details). Kondo, considered the closest prior art of record, does not teach the same method of envelop calculation. While broadly interpreted, Kondo meets these limitations, however, because of this, there could be no carrier extraction of the digital input signal or modulation according to a new envelope. Thus, it is not anticipated and it would not have been obvious to modify.

Regarding Claims 17, 19 and 24 the prior art fails to explicitly teach two envelope calculations. It would not have been obvious to one of ordinary skill in the art to modify the art to achieve the claimed limitations of the first and second envelope calculating means.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW C. FLANDERS whose telephone number is (571)272-7516. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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